

The Programming Initiative

Lowell Public School Committee Meeting
01.18.2023

The TPI Team

2022-23 School Year



Mr. Paul Morse

Advisor

Java Programming Teacher



Kenneth Chap

Co-founder

Senior



Ibraheem Amin

Co-founder

Junior

The TPI Team

2022-23 School Year



Dalya Hakari

Head of Fundraising
Senior

Why create TPI?

- There were initially a lack of support for computer science (CS)
 - H Java Programming
 - H Web Development
 - H Intro to Programming

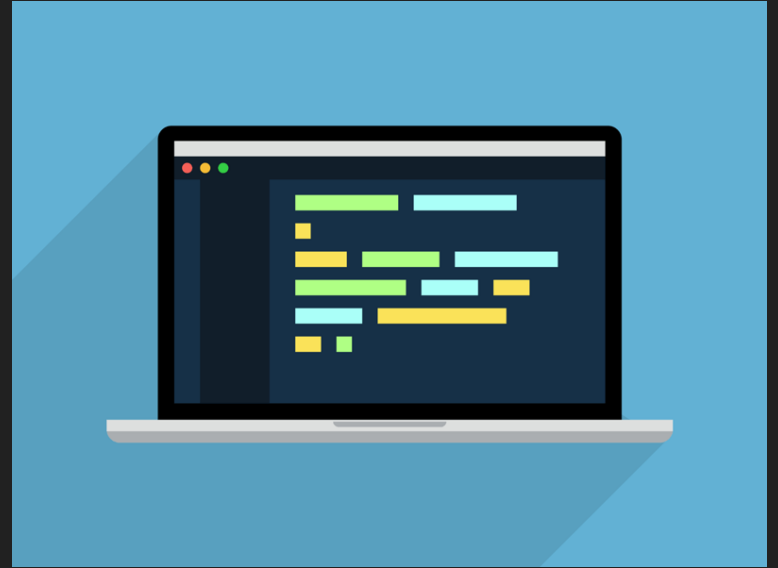
What are our objectives?

- Provide an opportunity to learn and incorporate CS outside of class
 - Adv Information Technology ([After Dark](#))
- Foster a safe environment for anyone interested in CS
- Inform members about different [CS/STEM opportunities](#)
- Expand Lowell High representation in CS

How did we recruit members?

- Surveyed student interest schoolwide (May–June 2022)
- Posted on Google Classrooms schoolwide (e.g. College and Career Center)
- Passed around flyers with help from Lowell High teachers and [Project LEARN](#)
- Hosted Flex Block to pull interest for the club from within school hours

So how does the
afterschool club
work?...





Source: [Lowell Sun](#)

Every Friday 2:40–3:45 pm, we teach!

LHS TPI
265101@student.lowell.k1...

≡

Search...

Integrations

Settings & members

Invite new member

PROJECTS +

Topic 0: What is Python?

Topic 1: The Basics

Topic 2: Functions

Topic 3: Classes and OOP

Topic 4: Reading and Writing Files

Topic 5: Modules and Packages

Topic 6: Discord.py

Upgrade to create unlimited projects
You reached a limit of 5 projects for this workspace. [Upgrade now.](#)

Explore

Chat & resources

Deepnote

Free

LHS TPI / Topic 1: The Basics / !Topic 1

Machine offline. [Restore variables](#) from last session.

Run notebook

↺

Topic 1: The Basics

The `print()` function lets you print a message to the screen.

```
print("Hello!")
```

Hello!

Variables and Variable Assignment

Variables are containers for storing data values. It is created the moment you first **assign** a value to it.

```
x = 5  
y = "John"  
print(x)  
print(y)
```

5
John

Rules for Python Variables

- Variable names **must start** with a letter or underscore character.
- Variable names **cannot start** with a number.
- Variable names can only contain **alpha-numeric characters and underscores** (A-z, 0-9, and `_`).

Share

Publish

☆

...

Project

Integrations

Comments

History

NOTEBOOKS +

!Topic 1

01_basic_addition_calc

02_shoot_the_target

03_fizz_buzz

04_this_is_a_string_part1

05_this_is_a_string_part2

06_sum_the_list

FILES +

core.32

ENVIRONMENT

Python 3.10

Basic

RAM: 0 GB CPU: 0%

TERMINALS +

Create a new terminal by hitting the + icon in top right of the sidebar

TABLE OF CONTENTS

1. Topic 1: The Basics

i. Variables and Variable Assignment

ii. Comments

iii. Data Types and Operations

Technology Used: [Deepnote](#)

Interactive activities and hands-on exercises.

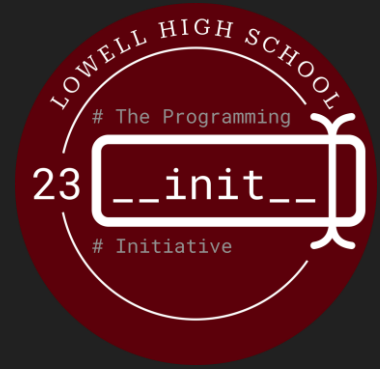


Source: [Lowell Sun](#)

Having students go on stage to help us demonstrate concepts!

What our members are working on!

- **COVERED SO FAR:** Core CS concepts
- **COMING UP:** Using third-party packages
- **END GOAL:** Create an application that takes in text commands provided by the user and displays its results after running those commands, such as fetching Instagram data



What is the future of TPI?...

We plan to expand interest in CS through TPI by...

1. Improve teaching and lesson activities

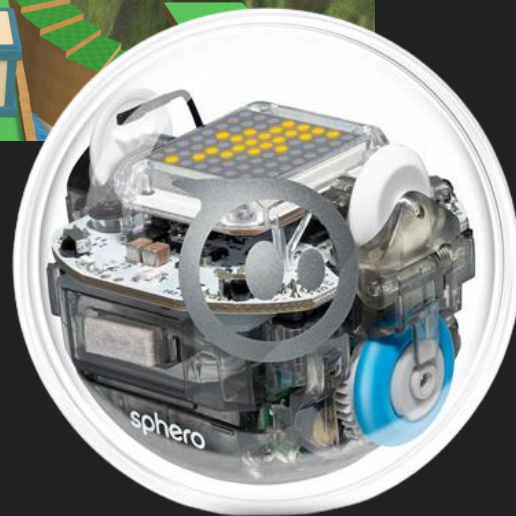
- We are **not** professional teachers
- Utilize teaching opportunities in and out of school

2. Expand leadership team

- Expand meeting times
- Be able to host Flex Blocks for more programming activities

3. Expand our content

- Start creating new types of content made available through fundraising & grants (e.g., coding Sphero Bots and Unity games)



...so that in the
future we can...

- Inspire more CS course offerings in the future
- Inspire and help students utilize CS to improve not only Lowell Public Schools, but also the Lowell community!

A large, faint, circular logo for Lowell High School 23c Initiative is centered in the background. The text "LOWELL HIGH SCHOOL" is arched across the top, "23c" is on the left, and "Initiative" is on the right. In the center of the logo is a stylized graphic of a computer monitor with a rounded rectangle inside it.

`print("Any questions?")`

LOWELL HIGH SCHOOL

The Programming

```
print("Thank you very much!")
```

Initiative